



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20531
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,252	03/27/2001	Yoshihito Asao	Q63136	8284

7590

01/24/2002

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
WASHINGTON, DC 20037-3213

EXAMINER

TAMAI, KARL I

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 01/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/817,252

Applicant(s)

ASAO ET AL.

Examiner

Tamai IE Karl

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 28 November 2001 is: a) ☒ approved b) ☐ disapproved by the Examiner
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/065,571.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The objection to Figures 10 and 11 is withdrawn.
2. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 11/28/01 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Specification

3. The amended title, "Rotor for Dynamo-Electric Machine", is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed, such as "LUNDELL ROTOR WITH MAGNETIC PORTIONS BETWEEN THE CLAW POLES SECURED TO A BOBBIN".

Claim Rejections - 35 USC § 112

4. The rejection of Claims 8-15 under 35 U.S.C. 112, second paragraph, is withdrawn.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tajima et al.(Tajima)(JP 54116610) and Saval et al.(Saval)(US 5325003). Tajima teaches a claw pole rotor with opposing claw poles 4,6 around a coil 5 and a plurality of magnetic portions (adhesive and ferrite powder) between adjacent poles which abut the coil. The surface of the magnetic portion contacting the poles forming molded fitted portions which prevent radial movement of the magnetic members. The molded portion contacting the tips of the poles prevent axial shifting of the magnetic members. Tajima does not teach the coil having a bobbin with opposing flanges and the magnetic portion being resin with ferrite iron filings. Saval teaches a bobbin with opposing flange which abut the resin injected molded pole support 332. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the rotor of Tajima with the coil wound on a bobbin, as in Saval, to provide easy mount of the coil in the field pole.

7. Claims 7-10 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hotta et al.(JP 612-254,040)('040) and Hotta(JP 3-265,450)('450). '040 teaches a claw pole rotor with a resin bobbin and resin spacers, where the spacers abut the bobbin. The spacers include fitting portions 30-c extend from end to end on the poles to prevent both axial and radial movement. '040 does not teach magnetic material in the spacers. '450 teaches resin covers over magnetic material to reduce flux leakage. It would have been obvious to a person of ordinary skill in the art at the time of

Art Unit: 2834

the invention to construct the rotor of '040 with the magnetic material in the spacers(covers), as in '450, to reduce flux leakage.

8. Claims 11, 12, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hotta et al.(JP 612-254,040)('040) and Hotta(JP 3-265,450)('450), in further view of Burton (UK 2,074,795). '040 and '450 teach every aspect of the invention except the magnetic portions being a resin with ferrite iron filings. Burton teaches that magnetic material in motors is made from resin with iron filings. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the rotor of '040 and '450 with magnetic portion being made from resin with iron filings because Burton teaches the resin is preferred because it can be molded into the shape of the core.

9. Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tajima et al.(Tajima)(JP 54116610) and Saval et al.(Saval)(US 5325003), in further Burton(UK 2,074,795). Tajima and Saval teach every aspect of the invention except the magnetic portions being a resin with ferrite iron filings. Burton teaches that magnetic material in motors is made from resin with iron filings. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the rotor of Tajima and Saval with magnetic portion being made from resin with iron filings because Burton teaches the resin is preferred because it can be molded into the shape of the core.

10. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tajima et al.(Tajima)(JP 54116610) and Saval et al.(Saval)(US 5325003), in further Kusase et al.(Kusase)(US 5,483,116). Tajima and Saval teach every aspect of the invention except the bobbin made from resin. Kusase teaches the bobbin made from resin. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the rotor of Tajima and Saval with bobbin being made from resin because it is inexpensive to produce and easy to manufacture.

Response to Arguments

Applicant's arguments filed 11/28/01 have been fully considered but they are not persuasive. The Applicant's argument regarding Tajima and Saval (Claims 7, 9, and 10) is not persuasive. The Applicant argument that the magnetic portion of Tajima is a unitary piece rather than a plurality of magnetic portions is not persuasive. Tajima teaches a plurality of magnetic portion between the claw poles which are linked on the axial ends to form a single body, therefore it reads on the Applicant's claimed "plurality of magnetic portions. The Applicant's argument that Saval does not teach a plurality of magnetic portions is not persuasive. The Applicant's is viewing the references alone rather than the combined teachings of the two arguments (see *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) holding that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references). In the present case Tajima shows the magnetic portions abutting the black box of the

coil. Saval is combined with Tajima to show that is it common for the black box to represent a coil wrapped around a bobbin. The rejection is proper and maintained.

The Applicant's argument regarding Hotta and Hotta('040 and '450)(claims 7-10 and 13-15) is not persuasive. The Applicant's is viewing the references alone rather than the combined teachings of the two arguments (see *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) holding that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references). '040 teaches the bobbin connected to spacers between the poles. '450 teaches that when the spacers between the poles are filled with magnetic material, then flux leakage from the poles is reduced. It is very obviously that '040 should include the magnetic material of '450 in the spacers to reduce flux leakage. The rejection is proper and maintained.

The Applicant's argument regarding Burton is not persuasive. Hotta and Hotta or Saval and Tajima teach every element except the specific magnetic material embedded in the resin being iron filings. Burton teaches iron filing embedded in plastic to provide a magnetic material in motors and generators. It would have been obvious to use iron filing in plastic resin as the magnetic material in '040 or Tajima because it is easily molded into the proper shape as shown by Burton. The rejections are proper and maintained.

The Applicant's argument that Kusase does not teach magnetic portions between the claw poles is not persuasive. The Applicant's is viewing the references alone rather than the combined teachings of the two arguments (see *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) holding that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references). Tajima and Saval teach the magnetic portions between the claw poles. Kusase is merely teaching the specific material of the bobbin being resin. It is obvious that a resin bobbin is inexpensive to manufacture, furthermore Kusase teaches that they are used in claw pole (lundell) rotors. The rejection is proper and maintained.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (703) 305-7066. The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nestor Ramirez, can be reached at (703) 308-1371. The facsimile number for the Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Karl I Tamai
PRIMARY PATENT EXAMINER
January 21, 2002



KARL TAMAI
PRIMARY EXAMINER